

## **REMARKS**

Reconsideration of the present application, as amended, is respectfully requested.

### **I. STATUS OF THE CLAIMS**

Claims 1, 2, 4-32 and 56 are pending in this application. Claims 21-32 have been withdrawn from consideration. Claims 1, 2, 4-32 and 56 have been canceled herewith without prejudice. Moreover, new claims 57-76 have been added.

Support for the above amendments and new claims may be found throughout the specification as originally filed. No new matter has been added by virtue of this amendment.

### **II. TELEPHONE CONFERENCE WITH THE EXAMINER**

Initially, it is noted that Examiner Timothy Rude in a telephone conference with the undersigned on September 26, 2007 indicated that the original Restriction Requirement issued on December 15, 2003 could be shifted such that elected invention for prosecution in the present application can now include not only originally elected invention IX drawn to the in-line convey unit (elected on May 20, 2004 in Response to the December 15, 2003 Restriction Requirement) but also the substrate-combination unit and the loading unit. Consequently, now the in-line convey unit, the substrate-combination unit and the loading unit can all be examined together in the present application.

Accordingly, Applicants have canceled claims 1, 2, 4-32 and 56 and submitted new claims 57-76 which are in accordance with the above-mentioned shift in the original restriction requirement. In particular, new claim 57 recites, inter alia, an in system for manufacturing liquid crystal displays, which includes a load unit, an in-line convey unit, a substrate-combination unit and a substrate-attaching unit. For example, an exemplary

embodiment of the present invention which an in-line system for manufacturing liquid crystal displays illustrates an in-line convey unit 1170, a substrate-combination unit 6000, a loading unit 7000 and a substrate-attaching unit 8000 which are within the scope of claim 57. (See, e.g. page 6-7 and Fig. 3 of the present application).

Therefore, as new claim 57 is in accordance with the Examiner's agreed upon shift in examination, the examination of claim 57 as presented is respectfully requested. Furthermore, as new claims 58-65 depend from and further define features recited in claim 57 such as the substrate-attaching unit, examination of these dependent claims is likewise requested. Also, it is presumed that claims 66-71 and 74-76 will be withdrawn from consideration as being drawn to non-elected features. However, since dependent claims 66-71 and 74-76 depend directly or indirectly from claim 57 which is drawn to the elected invention, Applicants reserve their right under rejoinder to also have claims 66-71 and 74-76 examined in the present application in the event that claim 57 is allowed. (See **MPEP 821.04**).

It is further noted that that the Examiner in the above-mentioned telephone conference of September 26<sup>th</sup> also indicated that all "admissions" made on the record by the firm McGuire Woods LLP with regard to the patentable distinctness of the species of claims 1-32 and 56 would be withdrawn if Applicants made a statement retracting them. In this regard, Applicants state that the statements made on May 20, 2004 and December 6, 2005 with regard to the patentable distinctness of the species of claims 1-32 and 56 are hereby retracted as being erroneous. Rather, the species recited in claims 1-32 and 56 are indeed patentably distinct from each other. Therefore, in view of the above statement, removal of the above-mentioned admissions is hereby respectfully requested.

### **III. 35 U.S.C. 103(a) REJECTIONS**

**Claims 1, 2, 4-20 and 56 have been rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 5,978, 065 to Kawasumi et al. ("the Kawasumi patent") in view of Japanese patent application publication No. JP 56114928 to Adachi ("the Adachi publication").**

In response, it is submitted that new claim 57 is patentable over Kawasumi and/or Adachi, alone or in combination for at least the reasons set forth below.

Firstly, Kawasumi at the very least does not teach or suggest a substrate attaching unit which conjoins the substrates 1, 2 in a vacuum state as required by claim 1. In contrast, the Kawasumi reference expressly teaches away from the use of vacuum conditions and equipment for the manufacture of liquid crystal displays (LCDs). It is well known that under the U.S. patent laws, when a prior art reference or references teaches away or leads away from a claimed invention, obviousness may be rebutted. (See **MPEP 2145**).-

The Examiner states that Kawasumi does indeed teach a substrate attaching unit which conjoins the substrates under vacuum conditions. (See page 6 of the instant Office Action). It is submitted that the Examiner's interpretation of Kawasumi as teaching a substrate attaching unit which conjoins the substrates under vacuum conditions is wholly erroneous for at least the reasons set forth below.

Although Kawasumi may mention vacuum conditions for manufacturing liquid crystal display (LCDs) in conjunction with describing other conventional processes, Kawasumi does so only for the purpose of teaching away from their use in manufacturing LCDs. Instead, it is clear that a primary objective of Kawasumi is to have LCD manufacturing processes which avoid the use of vacuum conditions altogether. The above statement is evidenced by the fact that Kawasumi only discusses what it perceives to be disadvantages associated with using vacuum conditions in manufacturing LCDs and also by the fact that none of the embodiments described in Kawasumi utilize vacuum conditions. For example, in Kawasumi it is stated throughout that using vacuum conditions results in "...long manufacturing time and high cost." (See Col. 1, lines 26-50 and Col. 7, lines 4-7 of the Kawasumi patent). Moreover, Kawasumi states that with its LCD manufacturing processes, the need for using vacuum apparatuses or vacuum

conditions is no longer necessary and thus manufacturing costs may be kept low. (See Col. 7, lines 4-7 and Col. 21, lines 30-32 of the Kawasumi patent).

Furthermore, Applicants disagree with the Examiner's statement that Kawasumi mentions that the use of vacuum conditions provides suitable LCDs though more costly manufacturing conditions and affords better degasification of liquid crystal material. Rather, there does not appear to be any mention in Kawasumi whatsoever of any beneficial results stemming from the use of vacuum condition in manufacturing LCDs. On the contrary, Kawasumi, as mentioned above, only discusses disadvantages associated with using vacuum conditions in manufacturing LCDs and also states that its processes provide a cost effective replacement for those LCD manufacturing processes which utilize vacuum conditions. (See again Col. 1, lines 26-50, Col. 7, lines 4-7 and Col. 21, lines 30-32 of the Kawasumi patent). Thus, as can be gleaned from the above, Kawasumi does not teach or suggest using a substrate-attaching unit which conjoins a first substrate and a second substrate substrate in a vacuum state but rather it's teachings clearly discourage and teach away from using vacuum conditions in manufacturing LCDs.

Furthermore, the Adachi publication also fails to teach or suggest a substrate-attaching unit which conjoins a first substrate and a second substrate substrate in a vacuum state. The Adachi reference purports to disclose forming a stable orientation film on a liquid crystal panel glass plate 2 by mounting the glass plate 2, with a conductive film and a fluoresein powder 4 as an orienting agent scattered on the glass plate 2, on a belt conveyor 1. (See Abstract of Adachi) However, Adachi is completely silent regarding a substrate-attaching unit which conjoins a first substrate and a second substrate in a vacuum state as essentially recited in claim 57. Rather, Adachi teachings are limited to processes or treatments on only one substrate, but makes no mention whatsoever of combining two substrates using a substrate-attaching unit as required by claim 57.

For at least the reasons discussed, the Kawasumi and Adachi references alone or in combination at the very least fails to teach or suggest providing the above-mentioned substrate attaching unit feature, as recited in claim 57.

In sum, Kamasumi and/or Adachi alone in combination fail to teach or suggest an in-line system for manufacturing liquid crystal displays which includes all of the elements and which operate in the manner as recited in claim 57.

Therefore, new claim 57 is patentable over Kawasumi and Adachi alone or in combination. As claims 58-76 depend from claim 57, these claims are believed patentable over Kawasumi and Adachi alone or in combination for at least the reasons set forth above with regard to claim 57. Moreover, besides the reasons set forth above, dependent claims 58-76 are even further distinguished over Kawasumi and Adachi alone or in combination because these references fail to teach or suggest the specific features recited in these claims.

#### IV. CONCLUSION:

In summary, applicant respectfully submits that the instant application is in condition for allowance. Early notice to that end is earnestly solicited.

If a telephone conference would be of assistance in furthering prosecution of the subject application, applicant requests that the undersigned be contacted at the number below.

Respectfully submitted,



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